



AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recorded on the guiding track, the system comprising:

a first photodetector having photodetecting elements divided at least by a first dividing line optically parallel with a tangential direction of the information writing track of the disc for detecting reflected light of a first laser beam irradiated to the information writing track;

a plurality of adders for adding outputs of the photodetecting elements on each side of the first dividing line of the first photodetector;

a second photodetector having photodetecting elements divided at least by a second dividing line optically parallel with the tangential direction for detecting reflected light of a second laser beam irradiated to the guiding track;

a plurality of adders for adding outputs of photodetecting elements on each side of the second dividing line of the second photodetector;

first difference signal producing means for producing a first difference signal based on a difference between the added outputs of the photodetecting elements of each side of the first photodetector being divided by the first dividing line;

second difference signal producing means for producing a second difference signal based on a difference between the added outputs of the photodetecting elements of each side of the second photodetector being divided by the second dividing line;

level adjust means for adjusting a level of at least the second difference signal,
and

tracking error signal producing means for producing a tracking error signal based
on subtracting an output signal of the level adjust means from the first difference signal.

2. (Previously Presented) The reading system according to claim 1,
wherein

the second photodetector is further divided by a third dividing line optically
parallel with a radial direction of the optical disc;

third difference signal producing means is provided for producing a third
difference signal based on a difference between the added outputs of photodetecting
elements of each side divided by the third dividing line, the prepit information being
obtained based on the third difference signal.

Claims 3-4 (Canceled)

5. (Previously Presented) The reading system according to claim 1, wherein
the level adjust means comprises a multiplier.

6. (Currently Amended) A reading system for reading a writable optical
disc having an information writing track, a guiding track for introducing a laser beam to

the information writing track, and prepit information including address information recording on the guiding track, the system comprising:

a first light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a second light receiving means for receiving a reflected light of a laser beam irradiated to the guiding track of the optional disc;

a prepit information detecting means for detecting prepit information based on an output from said second light receiving means;

~~a preliminary tracking error signal producing means for producing a preliminary tracking error signal including an influence of the prepit information based on an output of the first light receiving means; and~~

~~removing means for removing the influence~~ a subtracting means for subtracting a component of the prepit information extracted from the output of the second light receiving means, ~~from the preliminary tracking error signal and outputting an original tracking error signal.~~

7. (Currently Amended) The reading system for reading a writable optical disc according to claim 6, wherein

the first and second light receiving means comprise detectors ~~is a detector~~ having divided four elements.

8. (Canceled)

9. (Currently Amended) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a first light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a second light receiving circuit which receives a reflected light of a laser beam irradiated to the guiding track of the optical disc;

a prepit information detecting circuit which detects the prepit information based on an output from the second light receiving circuit;

a ~~preliminary~~ tracking error signal producing circuit which produces a ~~preliminary~~ tracking error signal ~~including an influence of the prepit information~~ based on an output of the first light receiving circuit; and

a ~~removing~~ subtracting circuit which ~~removes the influence~~ subtracts a component of the prepit information extracted from the output of the second light receiving circuit, from the ~~preliminary~~ tracking error signal and ~~outputs an original tracking error signal.~~

10. (Currently Amended) The reading system according to claim 9, wherein the first and second light receiving circuit circuits comprise detectors ~~is a detector~~ divided into four elements.

11. (Canceled)

12. (Previously Presented) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a first photodetector having a first photodetecting element and a second photodetecting element divided by a first line optically parallel with a tangential direction of the information writing track, which detects reflected light of a first laser beam irradiated to the information writing track;

a first subtracting circuit which produces a first difference signal based on outputs of the first photodetecting element and the second photodetecting element of the first photodetector;

a second photodetector having a third photodetecting element and a fourth photodetecting element divided by a second line optically parallel with a tangential

direction of the information writing track, which detects reflected light of a second laser beam irradiated to the guiding track including the prepit information;

a second subtracting circuit which produces a second difference signal based on outputs of the third photodetecting element and the fourth photodetecting elements of the second photodetector;

a level adjusting circuit which adjusts a level of the second difference signal; and

a tracking error signal generating circuit which generates a tracking error signal based on the first difference signal and an output of the level adjusting circuit.

13. (Previously Presented) The reading system according to claim 12, further comprising a prepit detection circuit which generates a prepit signal based on an output of the second photodetector.

14. (Previously Presented) The reading system according to claim 13, wherein the second photodetector is further divided by a third line optically parallel with a radial direction of the optical disc, and wherein the prepit detection circuit generates the prepit signal by subtracting an output of one side of the second photodetector divided by the third line from an output of another side of the second photodetector divided by the third line.

15. (Currently Amended) The reading system ~~for reading a writable optical disc,~~ according to claim 6, wherein the ~~influence of the prepit information~~ tracking error signal comprises a noise component.

16. (Currently Amended) The reading system, according to claim 9, wherein the ~~influence of the prepit information~~ tracking error signal comprises a noise component.

17. (Currently Amended) A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recording on the guiding track, the system comprising:

a light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting means for detecting prepit information;

a tracking error signal producing means for producing a tracking error signal based on an output of the light receiving means; and

a removing means for removing a ~~noise~~ component of the prepit information ~~based on an output of the prepit information detecting means,~~ from the tracking error signal through extracting the component of the prepit information on the output of the prepit information detecting means and subtracting the component from the tracking error signal.

18. (Currently Amended) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting circuit which detects the prepit information;

a tracking error signal producing circuit which produces a tracking error signal based on an output of the light receiving circuit; and

a removing circuit which removes a noise component of the prepit information, ~~based on an output of the prepit information detecting circuit~~, from the tracking error signal through extracting the component of the prepit information based on the output of the prepit information detecting circuit and subtracting the component from the tracking error signal.

19. (New) The reading system according to claim 6, wherein the component of the prepit information passing through a multiplier for correction is subtracted from the tracking error signal.

20. (New) The reading system according to claim 9, wherein the component of the prefit information passing through a multiplier for correction is subtracted from the tracking error signal.